

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Bradley S. Bowling on 09/04/2008.

The application, particularly claim 1, has been amended as follows:

1. **(currently amended):** A system for overflow and saturation processing, comprising:
 - an adder, operatively connected to receive first and second operands, and connected to add the operands to produce a result of the added operands;
 - an accumulator, operatively connected to store at least a portion of the result of the added operands or at least a portion of a selected one of predetermined constants based on control signals;
 - guard bits, operatively connected to store the remaining portion of the result of the added operands or the remaining portion of the selected one of predetermined constants based on the control signals;
 - overflow logic operatively connected to the accumulator and to the guard bits so as to indicate overflow of the accumulator;

saturation logic, operatively connected to the adder, to the guard bits, and connected to provide the control signals based on at least a portion of the result of the added operands and at least a portion of the guard bits; and

wherein the saturation logic comprises a plurality of AND logic gates and a plurality of inverting logic gates, the pluralities of AND gates and the plurality of inverting logic gates configured to compare most significant bits of the guard bits and most significant bits of the result of the added operands, and further configured to generate the control signals in accordance with the comparison.

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2. Claims 1 and 3-5 are allowed.
3. Claims 2 and 6-7 are cancelled.
4. The following is an examiner's statement of reasons for allowance:

The prior art of records fails to disclose or render an obviousness of a system for overflow and saturation processing comprising: an adder; an accumulator; guard bits; an overflow logic; a saturation logic; and wherein the saturation logic comprises a plurality of AND logic gates and a plurality of inverting logic gates, the pluralities of AND gates and the plurality of inverting logic gates configured to means for comparing most significant bits of the guard bits and most significant bits of the result of the added operands, and further configured to generate the control signals in accordance with the comparison along with other specific functions/limitations as cited in the independent claim 1.

The closest found prior art is Ishida et al. (U.S. 4,945,507). Ishida et al. also disclose a system for overflow and saturation processing comprising: an adder; an accumulator; guard bits; an overflow logic; and a saturation logic. However, Ishida et al. explicitly fail to disclose the saturation logic comprises a plurality of AND logic gates and a plurality of inverting logic gates, the pluralities of AND gates and the plurality of inverting logic gates configured to means for comparing most significant bits of the guard bits and most significant bits of the result of the added operands, and further configured to generate the control signals in accordance with the comparison as cited above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAT C. DO whose telephone number is (571)272-3721. The examiner can normally be reached on Tue-Fri 7:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chat C. Do/
Primary Examiner, Art Unit 2193

September 4, 2008